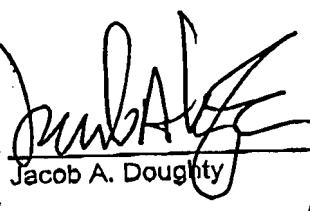
**FACSIMILE**

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Alexandria, VA 22313-1450

**ATTENTION: MAGDALEN GREENLIEF  
OFFICE OF THE DEPUTY COMMISSIONER  
PATENT EXAMINATION POLICY  
FAX NO: 571-273-0125**

on Date: September 21, 2007 Signature: 

Jacob A. Doughty

Total number of pages including this page: 37

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Dept.: Chemical  
By: NFO/JAD/dlc

OSMM&N File No.292122US0PCT

Serial No. 10/582,873

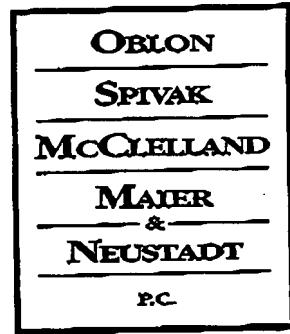
In the matter of the Application of: Naoki HOSOYA, et al.

For: BOTTLED BEVERAGE

Due Date: N/A

- Dep. Acct. Order Form
- Request for Participation in the Patent Prosecution Highway (PPH) Pilot Program Between the (1) JPO or (2) UKIPO, and the USPTO w/attached Appendices A Through G
- Appendix A - Explanation of Circumstances Concerning Accelerated Examination
- Appendix B - Copy of Claims Determined to be Patentable by JPO
- Appendix C - English Language Translation of Explanation of Circumstances Concerning Accelerated Examination
- Appendix D - English Language Translation of Copy of Claims Determined to be Patentable by JPO
- Appendix E - Statement Regarding Accuracy of English Language Translations
- Appendix F - Preliminary Amendment
- Appendix G - Claims Correspondence Table

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Docket No.: 292122US0PCT

ATTORNEYS AT LAW

COMMISSIONER FOR PATENTS  
ALEXANDRIA, VIRGINIA 22313

**ATTENTION: MAGDALEN GREENLIEF  
OFFICE OF THE DEPUTY COMMISSIONER  
PATENT EXAMINATION POLICY**

RE: Application Serial No.: 10/582,873

Applicants: Naoki HOSOYA, et al.

Filing Date: June 14, 2006

For: BOTTLED BEVERAGE

Group Art Unit: 1761

Examiner:

SIR:

Attached hereto for filing are the following papers:

**Request for Participation in the Patent Prosecution Highway (PPH) Pilot Program Between the  
(1) JPO or (2) UKIPO, and the USPTO w/attached Appendices A Through G**

Our credit card payment form in the amount of \$130.00 is attached covering any required fees. In the event any variance exists between the amount enclosed and the Patent Office charges for filing the above-noted documents, including any fees required under 37 C.F.R. 1.136 for any necessary Extension of Time to make the filing of the attached documents timely, please charge or credit the difference to our Deposit Account No. 15-0030. Further, if these papers are not considered timely filed, then a petition is hereby made under 37 C.F.R. 1.136 for the necessary extension of time. A duplicate copy of this sheet is enclosed.

Respectfully submitted,

OBLON, SPIVAK, McCLELLAND,  
MAIER & NEUSTADT, P.C.

Norman F. Oblon

Jacob A. Doughty  
Registration No. 46,671

Customer Number

22850

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**REQUEST FOR PARTICIPATION IN THE PATENT PROSECUTION HIGHWAY (PPH) PILOT PROGRAM  
BETWEEN THE (1) JPO OR (2) UKIPO, AND THE USPTO**

Application No.:	10/582,873	First Named Inventor:	Masaki IWASAKI
Filing Date:	06/14/2006	Attorney Docket No.:	292122US0PCT
Title of the Invention:	BOTTLED BEVERAGE		

THIS REQUEST FOR PARTICIPATION IN THE PPH PILOT PROGRAM MUST BE FAXED TO:  
THE OFFICE OF THE COMMISSIONER FOR PATENTS AT 571-273-0125 DIRECTED TO THE ATTENTION OF MAGDALEN GREENLIEF

APPLICANT HEREBY REQUESTS PARTICIPATION IN THE PATENT PROSECUTION HIGHWAY (PPH) PILOT PROGRAM AND PETITIONS TO MAKE THE ABOVE-IDENTIFIED APPLICATION SPECIAL UNDER THE PPH PILOT PROGRAM.

The above-identified application validly claims priority under 35 U.S.C. 119(a) and 37 CFR 1.55 to one or more corresponding JPO application(s) or UKIPO application(s).

The  JPO  UKIPO application number(s) is/are: 2003-420907

The filing date of the  JPO  UKIPO application(s) is/are: 12/18/2003

**I. List of Required Documents:**

- a. A copy of all JPO office actions (excluding "Decision to Grant a Patent") in the above-identified JPO application(s), or a copy of all UKIPO office actions in the above-identified UKIPO application(s).
  - Is attached. (See Appendix A, attached hereto)
  - Is available via Dossier Access System. Applicant hereby requests that the USPTO obtain these documents via the Dossier Access System.

\*It is not necessary to submit a copy of the "Decision to Grant a Patent" and an English translation thereof.
- b. A copy of all claims which were determined to be patentable by the JPO in the above-identified JPO application(s), or a copy of all claims which were determined to be patentable by the UKIPO in the above-identified UKIPO application(s).
  - Is attached. (See Appendix B, attached hereto)
  - Is available via Dossier Access System. Applicant hereby requests that the USPTO obtain these documents via the Dossier Access System.
- c. English translations (where applicable) of the documents in a. and b. above along with a statement that the English translations are accurate are attached. (See Appendices C and D, attached hereto)

Information disclosure statement listing the documents cited in the JPO office actions or UKIPO office actions is attached.

Copies of all documents are attached except for U.S. patents or U.S. patent application publications.  
All references cited in the JPO Office Action are already of record in this application.

[Page 1 of 2]

This collection of information is required by 35 U.S.C. 119, 37 CFR 1.55, and 37 CFR 1.102(d). The information is required to obtain or retain a benefit by the public, which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. FAX COMPLETED FORMS TO: Office of the Commissioner for Patents at 571-273-0125, Attention: Magdalena Greenlief.

PTO/SB/20 (09-07)

Approved for use through 12/31/2008. OMB 0651-0058

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

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**REQUEST FOR PARTICIPATION IN THE PATENT PROSECUTION HIGHWAY (PPH) PILOT PROGRAM  
BETWEEN THE (1) JPO OR (2) UKIPO, AND THE USPTO**

(continued)

Application No.:	10/582,873	First Named Inventor:	Masaki IWASAKI
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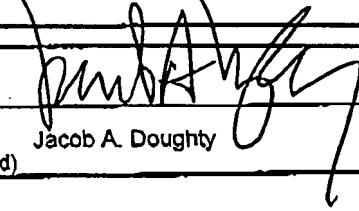
**II. Claims Correspondence Table:**

Claims in US Application	Patentable Claims in JP/UKIPO Application	Explanation regarding the correspondence
		(See Appendices F and G, attached hereto)

**III. All the claims in the US application sufficiently correspond to the patentable/allowable claims in the JPO or UKIPO application.****IV. Payment of Fees:**

The Commissioner is hereby authorized to charge the petition fee under 37 CFR 1.17(h) as required by 37 CFR 1.102(d) to  Deposit Account No. \_\_\_\_\_.

Credit Card. Credit Card Payment Form (PTO-2038) is attached.

Signature		09/21/2007 Date
Name (Print/Typed)	Jacob A. Doughty	46,671 Registration Number

**WARNING:**

Petitioner/applicant is cautioned to avoid submitting personal information in documents filed in a patent application that may contribute to identity theft. Personal information such as social security numbers, bank account numbers, or credit card numbers (other than a check or credit card authorization form PTO-2038 submitted for payment purposes) is never required by the USPTO to support a petition or an application. If this type of personal information is included in documents submitted to the USPTO, petitioners/applicants should consider redacting such personal information from the documents before submitting them to the USPTO. Petitioner/applicant is advised that the record of a patent application is available to the public after publication of the application (unless a non-publication request in compliance with 37 CFR 1.213(a) is made in the application) or issuance of a patent. Furthermore, the record from an abandoned application may also be available to the public if the application is referenced in a published application or an issued patent (see 37 CFR 1.14). Checks and credit card authorization forms PTO-2038 submitted for payment purposes are not retained in the application file and therefore are not publicly available.

**Privacy Act Statement**

The Privacy Act of 1974 (P.L. 93-579) requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

The information provided by you in this form will be subject to the following routine uses:

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C. 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether disclosure of these records is required by the Freedom of Information Act.
2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.
3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.
4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).
5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.
6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2908. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (*i.e.*, GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspection or an issued patent.
9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

Request for Participation in the Patent  
Prosecution Highway Pilot Program  
U.S. Patent Application No. 10/582,873  
Attorney Docket No. 292122US0PCT

## APPENDIX G

### Claims Correspondence Table

Request for Participation in the Patent  
 Prosecution Highway Pilot Program  
 U.S. Patent Application No. 10/582,873  
 Attorney Docket No. 292122US0PCT

CLAIMS CORRESPONDENCE TABLE

Claims in US Application	Patentable Claims in JP Application	Explanation regarding the correspondence
Claim 1	Claim 1	Claim 1 of the US application is substantially identical to claim 1 of the JP application.
Claim 2	--	Claim 2 of the US application has been cancelled.
Claim 3	Claim 2	Claim 3 of the US application is substantially identical to claim 2 of the JP application.
Claim 4	Claim 3	Claim 4 of the US application is substantially identical to claim 3 of the JP application. US claim 4 differs from JP claim 5 only in that US claim 4 depends solely from US claim 1, while JP claim 3 depends from JP claim 1 or JP claim 2.
Claim 5	Claim 4	Claim 5 of the US application is substantially identical to claim 4 of the JP application. US claim 5 differs from JP claim 4 only in that US claim 5 depends solely from US claim 1, while JP claim 4 depends from any of JP claims 1-3.
Claim 6	Claim 5	Claim 6 of the US application is substantially identical to claim 5 of the JP application. US claim 6 differs from JP claim 5 only in that US claim 6 depends solely from US claim 1, while JP claim 5 depends from any of JP claims 1-4.
Claim 7	Claim 6	Claim 7 of the US application is substantially identical to claim 6 of the JP application. US claim 7 differs from JP claim 6 only in that US claim 7 depends solely from US claim 1, while JP claim 6 depends from any of JP claims 1-5.
Claim 8	Claim 7	Claim 8 of the US application is substantially identical to claim 7 of the JP application. US claim 8 differs from JP claim 7 only in that US claim 8 depends solely from US claim 1, while JP claim 7 depends from any of JP claims 1-6.

Request for Participation in the Patent  
Prosecution Highway Pilot Program  
U.S. Patent Application No. 10/582,873  
Attorney Docket No. 292122USOPCT

## APPENDIX B

Copy of Claims Determined to be Patentable by JPO

Request for Participation in the Patent  
Prosecution Highway Pilot Program  
U.S. Patent Application No. 10/582,873  
Attorney Docket No. 292122US0PCT

## APPENDIX D

English-Language Translation of Copy of Claims Determined to  
be Patentable by JPO

Request for Participation in the Patent  
Prosecution Highway Pilot Program  
U.S. Patent Application No. 10/582,873  
Attorney Docket No. 292122US0PCT

## APPENDIX E

### Statement Regarding Accuracy of English-Language Translations

DOCKET NO: 292122US0PCT

IN THE UNITED STATES PATENT & TRADEMARK OFFICE

IN RE APPLICATION OF

NAOKI HOSOYA, ET AL.

: EXAMINER:

SERIAL NO: 10/582,873

:

FILED: JUNE 14, 2006

: GROUP ART UNIT: 1761

FOR: BOTTLED BEVERAGE

:

STATEMENT REGARDING ACCURACY OF ENGLISH-LANGUAGE  
TRANSLATIONS

COMMISSIONER FOR PATENTS  
ALEXANDRIA, VIRGINIA 22313

SIR:

Applicants state that the English-language translations provided as Appendices D-F to the Request for Participation in the Patent Prosecution Highway (PPH) Pilot Program and Petition to Make Special under the PPH Pilot Program, filed herewith, are accurate.

Respectfully submitted,

OBLON, SPIVAK, McCLELLAND,  
MAIER & NEUSTADT, P.C.  
Norman F. Oblon

Jacob A. Doughty  
Registration No. 46,671  
Attorney of Record

Customer Number  
**22850**

Tel: (703) 413-3000  
Fax: (703) 413 -2220  
(OSMMN 06/04)

JP 3590050 B1

2004.11.17

## CLAIMS

[1] A packaged beverage of pH 2 to 6 with a green tea extract mixed therein, comprising the following ingredients (A) to (E):

- (A) from 0.01 to 1.0 wt% of non-polymer catechins,
- (B) quinic acid or a salt thereof,
- (C) from 0.0001 to 15 wt% of a sweetener,
- (D) from 0.001 to 0.5 wt% of sodium ions, and
- (E) from 0.001 to 0.2 wt% of potassium ions,

wherein a content weight ratio [(B)/(A)] of said quinic acid or salt thereof (B) to said non-polymer catechins (A) is from 0.0001 to 0.5 and a content of oxalic acid is 0.06 or less by weight relative to said non-polymer catechins (A).

[2] The packaged beverage according to claim 1, wherein said beverage is a non-tea-based beverage.

[3] The packaged beverage according to claim 1 or 2, which has a pH of from 2 to 5.

[4] The packaged beverage according to any one of claims 1-3, wherein said green tea extract as a raw material is one obtained by adjusting a concentrate of green tea extract, said concentrate comprising from 20 to 90 wt% of non-polymer catechins based on a solid content thereof, such that said content weight ratio [(B)/(A)] of said

JP 3590050 B1

2004.11.17

quinic acid or salt thereof (B) to said non-polymer catechins (A) falls within a range of from 0.0001 to 0.16.

[5] The packaged beverage according to any one of claims 1-4, wherein said sweetener (C) is an artificial sweetener.

[6] The packaged beverage according to any one of claims 1-5, which is in such a form that at least 300 mg of non-polymer catechins can be ingested per day.

[7] The packaged beverage according to any one of claims 1-6, which is filled in a clear container.

JP 3590050 B1 2004.11.17

(18) 日本国特許庁(JP)

## (12) 特許公報(B1)

(11) 特許番号

特許第3590050号  
(P3590050)

(45) 発行日 平成16年11月17日(2004.11.17)

(24) 登録日 平成16年8月27日(2004.8.27)

(51) Int.Cl.<sup>7</sup>A23L 2/52  
A23F 3/16  
A23L 1/30

F 1

A23L 2/00  
A23F 3/16  
A23L 1/30F  
B

請求項の数 7 (全 14 頁)

(21) 出願番号 特願2003-420907 (P2003-420907)  
 (22) 出願日 平成15年12月18日 (2003.12.18)  
 検査請求日 平成16年2月2日 (2004.2.2)  
 (31) 優先権主張番号 特願2003-204029 (P2003-204029)  
 (32) 優先日 平成15年7月30日 (2003.7.30)  
 (33) 優先権主張国 日本国 (JP)

早期審査対象出願

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 弁理士 的場 ひろみ

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(54) 【発明の名称】容器詰飲料

## (57) 【特許請求の範囲】

## 【請求項1】

緑茶抽出物を配合したpH2~6の容器詰飲料であって、次の成分(A)~(E)、

(A) 非重合体カテキン類 0.01~1.0重量%、

(B) キナ酸又はその塩、

(C) 甘味料 0.0001~1.5重量%、

(D) ナトリウムイオン 0.001~0.5重量%、

(E) カリウムイオン 0.001~0.2重量%

を含有し、キナ酸又はその塩(B)と非重合体カテキン類(A)との含有重量比

[(B)/(A)]が0.0001~0.5であり、シウ酸含有量が非重合体カテキン類(A)に対して重量比で0.06以下である容器詰飲料。 10

## 【請求項2】

飲料が非茶系飲料である請求項1記載の容器詰飲料。

## 【請求項3】

pHが2~5である請求項1又は2記載の容器詰飲料。

## 【請求項4】

原料緑茶抽出物が、固形分中に非重合体カテキン類を20~90重量%含有する緑茶抽出物の濃縮物を、キナ酸又はその塩(B)と非重合体カテキン類(A)との含有重量比[(B)/(A)]が0.0001~0.16の範囲になるように調整したものである請求項1~3のいずれか1項記載の容器詰飲料。 20

(14)

JP 3590050 B1 2004. 11. 17

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フロントページの続き

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審査官 内田 淳子

(56)参考文献 特許第3378577 (J.P. B2)

特開平11-253102 (J.P. A)

特開平10-248501 (J.P. A)

(58)調査した分野(Int.Cl.<sup>7</sup>, DB名)

A23F 3/16

(2)

JP 3590050 B1 2004.11.17

## 【請求項 5】

(C) 甘味料が、人工甘味料である請求項 1～4のいずれか 1 項記載の容器詰飲料。

## 【請求項 6】

非重合体カテキン類として 1 日 300 mg 以上摂取できる形態である請求項 1～5のいずれか 1 項記載の容器詰飲料。

## 【請求項 7】

透明容器に充填されたものである請求項 1～6のいずれか 1 項記載の容器詰飲料。

## 【発明の詳細な説明】

## 【技術分野】

## 【0001】

本発明は緑茶抽出物を配合したカテキンを高濃度に含有し、苦味、渋味が低減され長期間の飲用に適し、また苦味、渋味の安定性及び喉越しに優れ、透明容器での高温保存時の色調安定性に優れた容器詰飲料に関する。 10

## 【背景技術】

## 【0002】

カテキン類の効果としてはコレステロール上昇抑制作用やアミラーゼ活性阻害作用などが報告されている（例えば、特許文献 1、2 参照）。カテキン類のこのような生理効果を発現させるためには、成人一日あたり 4～5 杯のお茶を飲むことが必要であることから、より簡便に大量のカテキン類を摂取するために、飲料にカテキン類を高濃度配合する技術が望まれている。この方法の一つとして、緑茶抽出物の濃縮物（例えば、特許文献 3～5 参照）などを利用して、カテキン類を飲料に溶解状態で添加する方法がある。 20

## 【0003】

しかしながら、市販の緑茶抽出物の濃縮物をそのまま用いると、緑茶抽出物の濃縮物に含まれる成分の影響によって渋味や苦みが強く、また喉越しが悪くカテキンによる生理効果を発現させる上で必要となる長期間飲用する目的に適していなかった。一方、長期間の飲用に不向きな要素の一つである渋味を低減する方法として、デキストリンを配合する方法があるが、カテキン類を高濃度に配合する場合、これだけでは不十分であるという問題があった。また甘味料が入る飲料系であっても、市販の緑茶抽出物の濃縮物をそのまま用いるとその渋味や苦味は強く、飲んだ後半にいやな後味が残りやすく、また緑茶由来の不要な風味があり、苦味、渋味が特に高温保存時に変化する現象があり、苦味、渋味の安定性に優れず長期間飲用する目的には向かなかった（例えば特許文献 6）。また、飲料の外観が高温保存時に変化しやすく、透明容器に充填した場合、長期間色調が安定でなかった。 30

【特許文献 1】特開昭 60-156614 号公報

【特許文献 2】特開平 3-133928 号公報

【特許文献 3】特開 2002-142677 号公報

【特許文献 4】特開平 8-298930 号公報

【特許文献 5】特開平 8-109178 号公報

【特許文献 6】特表平 10-501407 号公報

## 【発明の開示】

## 【発明が解決しようとする課題】

## 【0004】

本発明の目的是、成分調整された飲料組成にすることで、高濃度のカテキン類を含有し、緑茶抽出物を使用しても苦味、渋味が低減され長期間の飲用に適し、また苦味、渋味の安定性及び喉越しに優れ、また、飲料の外観が高温保存時に変化しにくく、透明容器に充填しても長期間色調が安定である容器詰飲料を提供することにある。 40

## 【課題を解決するための手段】

## 【0005】

本発明者は、高濃度のカテキン類を含有する容器詰飲料の長期間の飲用に耐えられる風味向上に関して検討した結果、非重合体カテキン類に対するキナ酸の比率を調整するとど 50

Request for Participation in the Patent  
Prosecution Highway Pilot Program  
U.S. Patent Application No. 10/582,873  
Attorney Docket No. 292122US0PCT

## APPENDIX A

Explanation of Circumstances Concerning Accelerated  
Examination

Request for Participation in the Patent  
Prosecution Highway Pilot Program  
U.S. Patent Application No. 10/582,873  
Attorney Docket No. 292122US0PCT

## APPENDIX C

English-Language Translation of Explanation of Circumstances  
Concerning Accelerated Examination

## Explanation KS0780

[Name of Document] The Explanation of Circumstances  
Concerning Accelerated Examination

[Destination] Commissioner of the Patent Office

[Indication of Case]

[Application Number] Japanese Patent Application No.  
2003-420907

[Submitting Person]

[Identification Number] 000000918

[Name or Appellation] Kao Corporation

[Attorney]

[Identification Number] 110000084

[Name or Appellation] The Patent Corporate Body Aruga  
Patent Office

[Representative] NAKAJIMA Toshio

JP Office  
Aruga

[Explanation of Circumstances Concerning Accelerated  
Examination]

1. Circumstances

The accelerated examination relates to a packaged beverage disclosed in Claim 1 of the present invention, which is scheduled to be manufactured from January, 2005. As disclosed in Claim 1, the packaged beverage is a packaged beverage having pH of from 2 to 6 with a green-tea extract mixed therein, comprising specific contents of non-polymer catechins; a quinic acid or a salt thereof; a sweetener; sodium ions; and potassium ions.

## Explanation KS0780

## 2. Prior Art And Comparison

## (1) Documents

The applicant sufficiently discloses prior art documents in Paragraphs [0002] and [0003] of the Specification. The prior art documents disclosed by the applicant are as follows.

- a. Japanese Patent Application Laid-Open No. 60-156614
- b. Japanese Patent Application Laid-Open No. 3-133928
- c. Japanese Patent Application Laid-Open No. 2002-142677
- d. Japanese Patent Application Laid-Open No. 8-298930
- e. Japanese Patent Application Laid-Open No. 8-109178
- f. Japanese Patent Application National Publication No.

10-501407

- g. Japanese Patent No. 3378577

## (2) Comparison

i) The present invention discloses a packaged beverage as described in Claims.

(Claim 1) A packaged beverage having pH of from 2 to 6 with a green-tea extract mixed therein, comprising the following ingredients (A) to (E):

- (A) 0.01 to 1.0 wt% of non-polymer catechins;
- (B) a quinic acid or a salt thereof;
- (C) 0.0001 to 20 wt% of a sweetener;
- (D) 0.001 to 0.5 wt% of sodium ions; and
- (E) 0.001 to 0.2 wt% of potassium ions,

wherein a content weight ratio [(B)/(A)] of the quinic acid or the salt thereof (B) to the non-polymer catechins (A)

## Explanation KS0780

is from 0.0001 to 0.5.

(Claim 2) The packaged beverage according to claim 1, wherein the packaged beverage is a non-tea-based beverage.

(Claim 3) The packaged beverage according to claim 1 or 2, wherein a content of an oxalic acid is equal to or less than 0.06 in terms of a weight ratio to the non-polymer catechins (A).

(Claim 4) The packaged beverage according to any one of claims 1 to 3, wherein the pH of the packaged beverage is in a range of from 2 to 5.

(Claim 5) The packaged beverage according to any one of claims 1 to 4, wherein the green-tea extract as a raw material is obtained by adjusting a concentrate of the green-tea extract containing 20 to 90 wt% of the non-polymer catechins in a solid content, such that the content weight ratio [(B)/(A)] of the quinic acid or a salt thereof (B) to the non-polymer catechins (A) is in a range of from 0.0001 to 0.16.

(Claim 6) The packaged beverage according to any one of claims 1 to 5, wherein the sweetener (C) is an artificial sweetener.

(Claim 7) The packaged beverage according to any one of claims 1 to 6, wherein the packaged beverage is in such a form that 300 mg or more of the non-polymer catechins can be ingested per day.

(Claim 8) The packaged beverage according to any one of claims 1 to 7, wherein the packaged beverage is filled in a transparent container.

## Explanation KS0780

As described above, the packaged beverage according to the present invention is obtained by mixing a green-tea extract therein to contain a high concentration of non-polymer catechins, adjusting a ratio of a quinic acid to the non-polymer catechins to be in a specific range, adjusting concentrations of a sweetener, sodium ions, and potassium ions, and adjusting pH to be in range of from 2 to 6. By employing features of the present invention, it is possible to obtain advantages in that the packaged beverage contains a high concentration of the non-polymer catechins, has no different taste and flavor from those of a green tea, has reduced bitterness and astringency so as to be suitable for long-term drinking, has a stability of bitterness and astringency and a good swallow feeling, remains a long-term stability of color tone during a high temperature storage in a transparent container, and is particularly useful as a non-tea-based packaged beverage.

ii)

A. The document (a) discloses that tea catechins are useful as a cholesterol level suppressor. In addition, the document (b) discloses that tea polyphenol of the tea catechins or the like is useful as an  $\alpha$ -amylase activation suppressor.

However, the packaged beverage containing the non-polymer catechins is not disclosed in the documents (a) and (b). In addition, the object of the present invention such as a problem caused from long-term drinking, the adjustment of the ratio of the quinic acid to the non-polymer catechins in a specific range, and the adjustment of contents of the sweetener,

## Explanation KS0780

the sodium ions, and the potassium ions in specific ranges in the packaged beverage containing the non-polymer catechins are not disclosed, or suggested.

B. The document (c) discloses a packaged beverage containing dissolved catechins of non-epi catechins (A) and epi catechins (B), wherein contents thereof are (I)  $(A)+(B)=460$  to 2500 mg, (II)  $(A)=160$  to 2250 mg, (III)  $(A)/(B)=0.54$  to 0.90 per 500 mL beverage packaged in a container. In addition, the document (c) also discloses a packaged beverage manufacturing method, in which a concentrate of a green-tea extract is mixed and a sweetener may be mixed.

However, in the document (c), the most important feature of the present invention, that is, the adjustment of the ratio of the quinic acid to the non-polymer catechins in a specific range and the adjustment of contents of the sweetener, the sodium ions, and the potassium ions in specific ranges in the packaged beverage containing the non-polymer catechins are not disclosed.

C. The document (d) disclose a tea beverage having reduced astringency by saccharide distribution of a polyphenol and, more specifically, a method of manufacturing a tea extract or a tea beverage having reduced astringency by mixing a tea extract or a tea beverage with at least one of dextrin, cyclo-dextrin, and starch and reacting cyclo-malto dextrin glucanotransferase thereon.

In addition, the document (e) discloses a method of manufacturing a low-caffeine tea polyphenol by dissolving or

## Explanation KS0780

suspending a tea extract in water or a water-containing organic solvent and contacting it with a synthetic adsorptive under an alkali condition to remove caffeine.

However, in the documents (d) and (e), the object of the present invention such as improvement of taste and flavor invulnerable to long-term drinking, improvement of a stability of bitterness and astringency and a swallow feeling, and improvement of a stability of color tone during a high temperature storage of the packaged beverage containing the non-polymer catechins are not disclosed. In addition, in the documents (d) and (e), the most important feature of the present invention, that is, the adjustment of the ratio of the quinic acid to the non-polymer catechins in a specific range and the adjustment of contents of the sweetener, the sodium ions, and the potassium ions in specific ranges in the packaged beverage containing the non-polymer catechins are not disclosed, or suggested.

D. The document (f) discloses a fluid composite comprising (a) 0.01 to 0.35% of flavanol, (b) 0.01 to 0.3% of sodium ions, (c) 0.005 to 0.08% of potassium ions, (d) 0.1 to 20% of a carbohydrate substance supplying (i) 0.05 to 10.0% of fructose and (ii) 0.05 to 10.0% of glucose, and (e) water. As an example of the flavanol, catechins are disclosed therein.

However, in the document (f), the object of the present invention such as improvement of taste and flavor invulnerable to long-term drinking, improvement of a stability of bitterness and astringency and a swallow feeling, and improvement of a

## Explanation KS0780

stability of color tone during a high temperature storage of the packaged beverage containing the non-polymer catechins are not disclosed. In addition, in the document (f), one of the most important features of the present invention, that is, the adjustment of the ratio of the quinic acid to the non-polymer catechins in a specific range is not disclosed, or suggested.

E. The document (g) discloses a beverage with a concentrate or a refined material of a tea extract therein, wherein the beverage contains (A) non-polymer catechins and (B) a quinic acid, and wherein a content weight ratio [(B)/(A)] of the ingredient (B) to the ingredient (A) is in a range of from 0.01 to 1.0.

Although a residing feeling unique to the catechins after drinking is disclosed, in the document (g), the object of the present invention such as improvement of taste and flavor invulnerable to long-term drinking, improvement of a stability of bitterness and astringency and a swallow feeling, and improvement of a stability of color tone during a high temperature storage of the packaged beverage containing the non-polymer catechins are not disclosed. In addition, in the document (g), the adjustment of contents of the sweetener, the sodium ions, and the potassium ions in specific ranges is not disclosed. The advantages such as a long-term drinking ability, a stability of bitterness and astringency, a good swallow feeling, and a stability of color tone of the packaged beverage which can be obtained by adjusting the ratio of the quinic acid to the non-polymer catechins in a specific range and also mixing

## Explanation KS0780

specific contents of the sweetener, the sodium ions, and the potassium ions are not disclosed, or suggested.

F. As described above, in any one of the documents (a) to (g), the important features of the present invention, that is, the adjustment of the ratio of the quinic acid to the non-polymer catechins in a specific range and the mixing of specific contents of the sweetener, the sodium ions, and the potassium ions are not disclosed, or suggested.

According to the present invention, as disclosed in Paragraphs [0010] and [0011] and Tables 1 and 2 of the specification, a packaged beverage obtained by adjusting the ratio of the quinic acid to the non-polymer catechins to be in a range of from 0.0001 to 0.5 and mixing specific contents of the sweetener, the sodium ions, and the potassium ions can have useful advantages such as a long-term drinking ability, a stability of bitterness and astringency, a good swallow feeling, and a stability of color tone in comparison with packaged beverages having a mixing ratio deviating from the aforementioned range (see Comparison Examples 2 and 6 in Table 2).

Therefore, it is obvious that the present invention cannot be easily derived from any combinations of the Prior Art Documents (a) to (g) by the ordinarily skilled in the art.

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【書類名】 早期審査に関する事情説明書

【あて先】 特許庁長官 殿

【事件の表示】

【出願番号】 特願 2003-420907

【提出者】

【識別番号】 000000918

【氏名又は名称】 花王株式会社

【代理人】

【識別番号】 110000084

【氏名又は名称】 特許業務法人アルガ特許事務所

【代表者】 中嶋 俊夫

【早期審査に関する事情説明】

### 1. 事情

請求項1に記載されているように、緑茶抽出物を配合し、非重合体カテキン類、キナ酸又はその塩、甘味料、ナトリウムイオン及びカリウムイオンを一定量含有するpH2~6の容器詰飲料を、平成17年1月より生産開始する予定の実施関連発明である。

### 2. 先行技術及び対比説明

#### (1) 文献名

出願人は明細書段落(0002)及び(0003)において先行技術を十分に開示している。現在出願人が把握している先行技術文献は以下の通りである。

- a. 特開昭60-156614号公報
- b. 特開平3-133928号公報
- c. 特開2002-142677号公報
- d. 特開平8-298930号公報
- e. 特開平8-109178号公報
- f. 特表平10-501407号公報
- g. 特許第3378577号公報

ページ(2)

## (2) 対比説明

i) 本願発明は、特許請求の範囲に記載されたとおりの、

「(請求項1) 緑茶抽出物を配合したpH2~6の容器詰飲料であつて、次の成分(A)~(E)、

(A) 非重合体カテキン類	0.01~1.0重量%
(B) キナ酸又はその塩	
(C) 甘味料	0.0001~20重量%
(D) ナトリウムイオン	0.001~0.5重量%
(E) カリウムイオン	0.001~0.2重量%

を含有し、キナ酸又はその塩(B)と非重合体カテキン類(A)との含有重量比

[(B)/(A)]が0.0001~0.5である容器詰飲料。

(請求項2) 飲料が非茶系飲料である請求項1記載の容器詰飲料。

(請求項3) シュウ酸含有量が、非重合体カテキン類(A)に対して重量比で0.06以下である請求項1又は2記載の容器詰飲料。

(請求項4) pHが2~5である請求項1~3のいずれか1項記載の容器詰飲料。

(請求項5) 原料緑茶抽出物が、固形分中に非重合体カテキン類を20~90重量%含有する緑茶抽出物の濃縮物を、キナ酸又はその塩(B)と非重合体カテキン類(A)との含有重量比[(B)/(A)]が0.0001~0.16の範囲になるように調整したものである請求項1~4のいずれか1項記載の容器詰飲料。

(請求項6) (C) 甘味料が、人工甘味料である請求項1~5のいずれか1項記載の容器詰飲料。

(請求項7) 非重合体カテキン類として1日300mg以上摂取できる形態である請求項1~6のいずれか1項記載の容器詰飲料。

(請求項8) 透明容器に充填されたものである請求項1~7のいずれか1項記載の容器詰飲料。」

に係るものである。

本願発明の容器詰飲料は、上記の如く、緑茶抽出物を配合して非重合体カテキン類を高

濃度に含有し、非重合体カテキン類に対するキナ酸の比率を一定範囲に調整するとともに、甘味料、ナトリウムイオン及びカリウムイオン濃度を調整し、かつpHを2~6に調整したことを特徴とするものであり、このような構成を採用することにより、「非重合体カテキン類を高濃度含有し、かつ緑茶風味の他異味・異臭がなく、苦味、渋味が低減され長期間の飲用に適し、また苦味、渋味の安定性及び喉越しに優れ、また、透明容器に充填して高温保存しても長期間色調が安定であり、特に非茶系容器詰飲料として有用である」という効果を有するものである。

ii)

イ. 文献aには、茶カテキン類がコレステロール上昇抑制剤として有用であることが記載されている。また、文献bには、茶カテキン等の茶ポリフェノールが $\alpha$ -アミラーゼ活性阻害剤として有用であることが記載されている。

しかし、これらの文献a及びbのいずれにも、非重合体カテキン類を含有する容器詰飲料については全く記載されておらず、長期間飲用した場合の問題点等の本願発明の課題及び非重合体カテキン類に対するキナ酸の比率、甘味料、ナトリウムイオン、カリウムイオンの含有量等を一定の範囲に調整することについては何の記載がないばかりか示唆さえ存しない。

ロ. 文献cには、(A) 非エピ体カテキン類及び(B) エピ体カテキン類のカテキン類を溶解して含有し、それらの含有量が容器詰めされた飲料500mL当たり、(イ) (A)+(B)=460~2500mg、(ロ) (A)=160~2250mg、(ハ) (A)/(B)=0.54~0.90である容器詰飲料が記載されている。そして文献cには、容器詰飲料の製造にあたり、緑茶抽出物の濃縮物を配合すること、甘味料を配合してもよいことが記載されている。

しかしながら、文献cには、本願発明の最も重要な構成である、非重合体カテキン類に対するキナ酸の比率を一定範囲に調整すること、及び甘味料、ナトリウムイオン及びカリウムイオンの含有量を一定の範囲に調整することについては、何の記載もない。

ハ. 文献dには、ポリフェノール類を配糖化することにより渋味を低減した茶飲料、さらに詳細には茶抽出物または茶飲料をデキストリン、サイクロデキストリンおよび澱粉の

うちの少なくとも1種とを混ぜ、これにサイクロマルトデキストリングルカノトランスフェラーゼを作用させることを特徴とする渋みを低減した茶抽出物または茶飲料の製造法が記載されている。

また、文献eには、茶抽出物を水または含水有機溶媒中に溶解または懸濁し、これをアルカリ性条件下、合成吸着剤と接触させてカフェインを吸着除去することを特徴とする低カフェイン茶ポリフェノールの製造法が記載されている。

しかしながら、文献d及びeのいずれにも、本願発明の課題である、非重合体カテキン類含有容器詰飲料についての長期飲用に耐えられる風味の向上、苦味渋みの安定性及び喉ごしの向上、高温保存時の色調の改善等については全く記載されていない。そして、文献d及びeのいずれにも、本願発明の最も重要な構成である、非重合体カテキン類に対するキナ酸の比率を一定の範囲に調整すること、及び甘味料、ナトリウムイオン及びカリウムイオンの含有量を一定の範囲に調整することについては何の記載もないばかりか示唆さえ存しない。

二. 文献fには、(a) 0.01~0.35%フラバノール (b) 0.01~0.3%ナトリウムイオン (c) 0.005~0.08%カリウムイオン (d) (i) 0.05~10.0%フルクトース (ii) 0.05~10.0%グルコースを供給する0.1~20%炭水化物、及び(e) 水を含んでなる流体組成物が記載され、当該フラバノールの例としてはカテキン類が記載されている。

しかしながら、文献fには、本願発明の課題である、非重合体カテキン類含有容器詰飲料についての長期飲用に耐えられる風味の向上、苦味渋みの安定性及び喉ごしの向上、高温保存時の色調の改善等については全く記載されていない。そして、文献fには、本願発明の最も重要な構成である、非重合体カテキン類に対するキナ酸の比率を一定の範囲を調整することについては、何の記載もないばかりか示唆さえ存しない。

ホ. 文献gには、茶抽出物の濃縮物又は精製物を配合した飲料であって、(A) 非重合体カテキン類 (B) キナ酸を含有し、成分(A)と(B)の含有重量比[(B)/(A)]が0.01~1.0である飲料が記載されている。

しかしながら、文献gには、飲用後のカテキン類固有の残留感については記載されてい

るものの、本願発明の課題である、非重合体カテキン類含有容器詰飲料についての長期飲用に耐えられる風味の向上、苦味渋味の安定性、喉ごしの良さ、高温保存時の色調の安定性等については全く記載されていない。そして、文献gには、甘味料、ナトリウムイオン及びカリウムイオンを一定範囲に調整することについては、何の記載もない。また非重合体カテキン類に対するキナ酸の比率を一定の範囲を調整するだけでなく、甘味料、ナトリウムイオン及びカリウムイオンを特定量配合することによって、容器詰飲料が長期間の飲用性、苦味渋味の安定性、喉ごしの良さ及び色調の安定性において顕著に優れるという効果を奏することは何の記載もないばかりか示唆さえ存しない。

ヘ. 前記の如く、文献a～gのいずれにも、非重合体カテキン類に対するキナ酸の比率を一定の範囲に調整し、かつ甘味料、ナトリウムイオン及びカリウムイオンを一定量配合するという本願発明の重要な構成については何の記載もないばかりか示唆さえ存しない。

そして、本願発明においては、明細書段落(0010)、(0011)、表1及び表2に記載の如く、非重合体カテキン類に対するキナ酸の比率を0.0001～0.5になるように調整し、かつ甘味料、ナトリウムイオン及びカリウムイオンを一定量配合した容器詰飲料が、当該比率及び配合量がこの範囲外の容器詰飲料(表2中の比較例2及び6参照)に比べて、長期間の飲用性、苦味渋味の安定性、喉ごしの良さ及び色調の安定性において顕著に優れるという有利な効果を奏するものである。

従って、本願発明は、文献a～gに記載の発明を組み合せても、当業者にとって容易に想到できない発明であることが明らかである。

**Disclaimer:**

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**Notes:**

1. Untranslatable words are replaced with asterisks (\*\*\*\*).
2. Texts in the figures are not translated and shown as it is.

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Dictionary: Last updated 09/07/2007 / Priority:

### Decision to Grant a Patent

Application number: Application for patent 2003-420907

Date of Drafting: Heisei 16(2004) August Four days

Patent examiner: UCHIDA, Junko 8115 4C00

Title of invention: Bottled beverage

The number of claims: 7

Applicant: KAO CORPORATION

Representative: THE PATENT CORPORATE BODY ARUGA PATENT OFFICE (and 6 others)

This application is to be granted a patent as there is no reason for refusal.

Director General(p.p.) Director(p.p.) Examiner Assistant examiner Manager for Determination  
of Classification MURAKAMI, Kimitaka UCHIDA, Junko MURAKAMI, Kimitaka 8827 8115 8827

1. Distinction of Patent: Usually

2. Reference documents: \*\*

3. Application of Patent Law, Section 30: Nothing

4. Change of Title of Invention: Nothing

5. International Patent Classification (IPC)

A23L 2/00 F, A23F 3/16 , A23L 1/30 B

6. Patent Classification Additionally Assigned.

Edition code 4

7. Deposition of Microorganism

8. Indication that Retroactivity of Division/conversion Is Prohibited.

Decision to Grant a Patent(Memorandum)

Application number: Application for patent 2003-420907

1. Technical Fields to Be Searched (IPC, 7th Edition, DB Name)

A23F 3/16

2. Reference patent documents

Patent 3378577th (JP, B-2) JP,11-253102,A (JP, A) JP,10-248501,A (JP, A)

3. Reference books and magazines

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[Translation done.]